

Decay Resistance of South-west Pacific Rain-forest Timbers

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DIVISION OF FOREST PRODUCTS TECHNOLOGICAL PAPER NO. 56
COMMONWEALTH SCIENTIFIC AND INDUSTRIAL
RESEARCH ORGANIZATION, AUSTRALIA 1970

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1970

Printed by CSIRO, Melbourne

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Summary

The first part of this paper briefly outlines procedure and collates results of laboratory decay tests for 107 timbers from the Territory of Papua and New Guinea, the Fiji Islands, and the British Solomon Islands Protectorate. The second part tabulates laboratory and local durability ratings, and local common names of the 153 timber species received by the Division of Forest Products since 1961 for testing in the major cooperative research projects for these areas.

I. INTRODUCTION

A laboratory study has recently been made in the Division of Forest Products, CSIRO, of the decay resistance of more than 100 rain-forest timber species from the Territory of Papua and New Guinea, the Fiji Islands, and the British Solomon Islands Protectorate. This study formed part of a cooperative research project with the forestry department of each of these three regions. Detailed results of some of these tests have already been published (Da Costa and Osborne 1967; Osborne 1967), but as all current tests of these species have now been completed, this publication collates and compares results for all island timbers tested in this laboratory since 1961.

II. LABORATORY TESTS

(a) Method

The accelerated laboratory decay method used in this investigation has been described in detail by Da Costa and Osborne (1967). It is a "soil-block" method and consists essentially of subjecting sterilized blocks of the timbers to attack by pure cultures of wood-rotting fungi. The fungus is grown on thin strips of susceptible sapwood placed on sterile moist soil half-filling a screw-top glass jar and then two sterile test blocks are placed on the fungus. The decay occurring during the incubation period of 8 weeks (12 weeks for *Pycnoporus coccineus*) is measured as a percentage weight loss based on the initial air dry weight of the block. Four wood-destroying fungi were used in these tests, two brown-rotting fungi—*Coniophora olivacea* (Fr.) Karst. DFP 1779 and *Lenzites trabea* Pers. ex Fries (DFP 8845)—and two white-rotting fungi—*Pycnoporus coccineus* (Fr.) Bond. & Sing. (DFP 2544) and *Fomes lividus* (Kalch.) Sacc. (DFP 7904).

(b) Sampling

Unless otherwise stated only heartwood material was tested as the sapwood of almost all species is susceptible to decay. Due regard was given to the variation in durability across the radius of the heartwood by sampling from the outermost heartwood, expected to be the most durable, and from a position

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thought to be representative of the rest of the heartwood. Results showed that, in general, the outermost heartwood was more resistant than wood nearer the centre of the tree.

Wherever possible material from five trees was tested for each timber species. However, results have been included for species where fewer than five trees were available, but the reliability of a species assessment of durability will depend on the number of trees tested. In a few cases, after testing had begun, examination of botanical material showed that there was more than one botanical species within the "species" collected, two or more genera sometimes being represented. Wherever the botanical species have been found to be very similar in appearance in the field, and in anatomical structure, physical and strength properties, and durability the mixture has been regarded as one commercial species. These species mixtures are indicated in the tables. Where a species differed appreciably from the main species of the group it has been omitted.

An examination of the correlation between basic density and decay resistance, and between water uptake and decay resistance was made for a number of the rain-forest timbers from New Guinea and Fiji (Da Costa and Osborne 1967; Osborne 1967). Although there was not a close correlation in either case, it was shown that there was a tendency, both among species and within a species, for the denser and less water-absorbent wood to be more resistant to decay.

(c) *Durability Ratings*

Detailed results of the decay resistance tests are presented in Tables 1–6. These results are from laboratory decay tests only and therefore do not directly indicate expected life of a particular timber in service. However, they give useful comparisons of decay resistance between timber species, which, to date, have not been contradicted by the few service data and graveyard test results which are available. As these laboratory tests are only comparative, five "yardstick" exotic timbers, whose durabilities are well known and which represent a wide range of durability, were included.

Difficulties were encountered in arriving at a single durability rating from the values for percentage weight loss from tests against four different fungi, and these difficulties have been discussed elsewhere (Da Costa and Osborne 1967). Some slight differences in the degree of attack were also shown between different tests. Nevertheless, the timbers have been grouped into classes, mainly by reference to the yardstick timbers of known durability.

These durability classes are not directly related to the durability classes (1–4) used for Australian timbers. The latter classification is based on the resistance of eucalypt poles, posts, etc. in ground contact, i.e. severe decay hazard. Interest in these rain-forest timbers lies in their use as general building timbers more than as poles and posts in ground contact, and consequently the classes used here are based on slightly less severe service conditions.

Those timber species designated as "durable" show decay resistance comparable to that of *Eucalyptus microcorys* F. Muell. (tallowwood) and *Tectona grandis* L.f. (teak). *E. microcorys* is representative of the highly durable timbers used in Australia for prolonged service in ground contact, whilst *T. grandis* has an

TABLE 1
DECAY RESISTANCE OF NEW GUINEA TIMBERS—FIRST TEST

Timber Species	DFP Shipment No.	Mean Percentage Weight Loss* Caused by:				Mean	Laboratory Rating
		<i>Fomes lividus</i>	<i>Pycnopus coccineus</i>	<i>Lenzites trabea</i>	<i>Coniophora olivacea</i>		
<i>Eucalyptus microcorys</i> †	—	0.4	0.2	0.2	0.4	0.3	Durable
<i>Hopea iriana</i>	1335	1.9	0.1	0.4	2.4	1.2	
<i>Intsia bijuga</i>	1300	7.4	—0.5	—0.3	—0.4	1.6	
<i>Vitex cofassus</i>	1304	0.7	2.3	1.5	2.5	1.8	
<i>Garuga floribunda</i>	1332	2.1	4.9	1.7	2.8	2.9	
<i>Tectona grandis</i> †	—	6.3	1.9	1.3	3.0	3.1	Moderately durable
<i>Pterocarpus indicus</i>	1301	11.0	0.9	1.6	1.3	3.7	
<i>Ganophyllum falcatum</i>	1386	5.7	6.9	1.4	3.0	4.2	
<i>Planchonia papuana</i>	1357	6.6	2.9	0.8	9.6	5.0	
<i>Homalium foetidum</i>	1352	5.7	3.9	4.3	13.0	6.7	
<i>Eucalyptus obliqua</i> †	—	12.8	2.4	—0.2	19.4	8.6	Slightly durable
<i>Cinnamomum</i> sp.	1354	15.7	9.1	9.2	3.6	9.4	
<i>Eugenia</i> sp.	1382	9.6	12.6	2.2	18.4	10.7	
<i>Syzygium buettnerianum</i>	1305	11.6	12.6	3.8	17.1	11.3	
<i>Amoora cucullata</i>	1310	13.4	12.7	5.3	22.1	13.4	
<i>Anisoptera polyandra</i>	1316	16.4	15.7	5.7	17.7	13.9	
<i>Pseudotsuga menziesii</i> †	—	10.6	4.1	16.0	34.6	16.3	
<i>Eucalyptus deglupta</i>	1320	23.2	14.0	8.9	20.2	16.6	
<i>Toona sureni</i>	1309	23.9	14.2	6.2	22.5	16.7	
<i>Planchonella torricellensis</i>	1368	21.7	24.0	8.7	14.6	17.2	Non- durable
<i>Calophyllum papuanum</i>	1315	12.5	15.3	14.1	27.6	17.4	
<i>Pometia tomentosa</i>	1312	19.1	17.0	15.0	24.8	19.0	
<i>Dracontomelum mangiferum</i>	1311	20.1	31.4	11.3	22.8	21.4	
<i>Chisocheton</i> sp.	1359	26.8	43.0	4.2	23.5	24.4	
<i>Araucaria hunsteinii</i>	—	23.6	18.5	28.3	36.6	26.8	Non- durable
<i>Pterygota horsfieldii</i>	1369	24.6	39.9	9.4	34.6	27.1	
<i>Anthocephalus chinensis</i>	1328	25.3	37.5	30.3	18.0	27.8	
<i>Pinus radiata</i> (sapwood)†	—	24.7	22.6	29.6	40.2	29.3	
<i>Octomeles sumatrana</i>	1302	31.2	39.5	26.2	31.8	32.2	
<i>Flindersia amboinensis</i>	1373	25.5	39.0	32.9	32.3	32.4	Non- durable
<i>Ailanthus peckelii</i>	1380	29.6	—	—	40.0	34.8	

* Mean percentage weight loss of inner and outer heartwood blocks from five trees of each species.

† Reference timbers of known durability included for comparison.

TABLE 2
DECAY RESISTANCE OF NEW GUINEA TIMBERS—SECOND TEST

Timber Species	DFP Shipment No.	Mean Percentage Weight Loss* Caused by:				Mean	Laboratory Rating
		<i>Fomes lividus</i>	<i>Pycnoporus coccineus</i>	<i>Lenzites trabea</i>	<i>Coniophora olivacea</i>		
<i>Eucalyptus microcoryst</i> †	—	0.5	-1.3	-1.3	-0.7	-0.7	Durable
<i>Tectona grandis</i> †	—	5.3	2.0	2.7	2.6	3.2	
<i>Elmerrillia papuana</i>	1358	6.5	2.9	2.0	13.7	6.3	Moderately durable
<i>Dysoxylum</i> sp.	1390	14.8	3.6	-0.1	7.3	6.4	
<i>Nothofagus perryi</i>	1495	9.9	3.8	0.7	11.9	6.6	
<i>Xanthophyllum papuanum</i>	1379	13.3	15.8	3.6	5.2	9.5	
<i>Eucalyptus obliqua</i> †	—	14.7	2.9	0.9	21.8	10.1	Slightly durable
<i>Castanopsis acuminatissima</i>	1494	22.3	11.7	1.2	21.8	14.2	
<i>Maniltoa psilogyne</i>	1395	24.3	20.9	3.8	17.1	16.5	
<i>Schizomeria serrata</i>	1383	16.7	11.7	20.3	25.3	18.5	
<i>Cordia dichotoma</i>	1389	29.3	9.8	10.7	24.7	18.6	Non-durable
<i>Pseudotsuga menziesii</i> †	—	19.0	5.7	14.9	36.5	19.0	
<i>Sloanea forbesii</i>	1385	33.3	37.6	5.0	9.2	21.3	
<i>Elaeocarpus sphaericus</i>	1337	38.2	17.3	7.4	31.1	23.5	
<i>Sloanea</i> sp.	1384	34.0	35.6	6.3	20.5	24.1	Non-durable
<i>Tetrameles nudiflora</i>	1375	14.7	13.1	34.7	34.1	24.2	
<i>Terminalia kaernbachii</i>	1333	34.0	24.1	17.5	24.2	25.0	
<i>Duabanga moluccana</i>	1318	47.5	28.7	5.3	21.8	25.8	
<i>Albizia falcata</i>	1319	50.1	12.1	23.0	25.3	27.6	Non-durable
<i>Mastixiodendron pachyclados</i>	1393	23.9	39.0	19.5	31.6	28.5	
<i>Chisocheton schumannii</i>	1387	29.6	38.3	26.7	31.3	31.5	
<i>Pinus radiata</i> (sapwood)†	—	27.9	21.8	36.3	42.4	32.1	
<i>Canarium oleosum</i>	1331	45.8	34.5	23.7	33.1	34.3	Non-durable
<i>Myristica buchneriana</i>	1360	49.8	34.1	28.6	33.9	36.6	
<i>Celtis nyanii</i>	1372	39.4	43.9	31.3	34.8	37.4	
<i>Pterocymbium beccarii</i>	1306	47.4	45.9	23.4	34.2	37.7	
<i>Spondias dulcis</i>	1308	44.4	45.0	28.0	38.0	38.8	Non-durable
<i>Endospermum medullosum</i>	1321	47.0	35.3	35.1	38.9	39.1	
<i>Buchanania macrocarpa</i>	1307	58.6	53.1	38.5	43.1	48.3	

* Mean percentage weight loss of inner and outer heartwood blocks from five trees of each species.

† Reference timbers of known durability included for comparison.

TABLE 3
DECAY RESISTANCE OF NEW GUINEA TIMBERS—THIRD TEST

Timber Species	DFP Shipment No.	No. of Trees Tested	Mean Percentage Weight Loss* Caused by:				Mean	Laboratory Rating
			<i>Fomes lividus</i>	<i>Pycnoporus coccineus</i>	<i>Lenzites trabea</i>	<i>Coniophora olivacea</i>		
<i>Pleiogynium timorense</i>	1399	5	1.0	0.5	-0.2	-0.5	0.2	Durable
<i>Manilkara kanosensis</i>	1483	2	1.2	0.0	0.2	0.5	0.5	
<i>Eucalyptus microcoryst</i> †	—	5	1.4	0.5	0.3	0.5	0.7	
<i>Cathormion umbellatum</i>	1482	5	0.9	1.3	0.8	0.4	0.8	
<i>Tectona grandis</i> †	—	5	2.7	2.2	0.1	-0.3	1.2	
<i>Gmelina moluccana</i>	1374	2	1.5	2.7	1.2	3.0	2.1	Moderately durable
<i>Neonauclaea papuana</i>	1366	3	4.5	5.4	3.3	11.2	6.1	
<i>Tristiropsis canarioides</i>	1388/1388A	5	12.7	22.0	-0.2	14.8	12.3	Slightly durable
<i>Eucalyptus obliqua</i> †	—	5	20.8	11.3	1.4	19.0	13.1	
<i>Pseudotsuga menziesii</i> †	—	5	9.0	3.2	10.5	30.4	13.3	
<i>Heritiera</i> sp. cf. <i>littoralis</i>	1394	5	17.0	22.1	1.8	24.4	16.3	
<i>Drypetes</i> spp. ‡	1391	5	18.1	32.5	3.8	23.3	19.4	
<i>Terminalia complanata</i>	1378	4	26.8	31.2	9.5	24.8	23.1	Non- durable
<i>Podocarpus amarus</i>	1361	3	11.3	18.8	36.3	33.7	25.0	
<i>Pinus radiata</i> (sapwood)†	—	5	20.2	33.4	28.7	39.4	30.4	
<i>Diospyros</i> sp.	1398	5	24.5	31.1	40.2	34.2	32.5	
<i>Planchonella kaernbachiana</i>	1326	4	30.8	37.8	25.0	40.0	33.4	
<i>Flindersia pimentelliana</i>	1317	4	35.2	55.6	28.1	29.2	37.0	
<i>Cryptocarya</i> spp. ‡	1355	2	41.8	45.5	37.0	49.6	43.5	

* Mean percentage weight loss of inner and outer heartwood blocks from two to five trees of each species.

† Reference timbers of known durability included for comparison.

‡ Groups consisting of more than one botanical species but regarded as one commercial group (see Table 7).

TABLE 4
DECAY RESISTANCE OF FIJIAN TIMBERS—FIRST TEST

Timber Species	DFP Shipment No.	No. of Trees Tested	Mean Percentage Weight Loss* Caused by:				Mean	Laboratory Rating	
			<i>Fomes lividus</i>	<i>Pycnoporus coccineus</i>	<i>Lenzites trabea</i>	<i>Coniophora olivacea</i>			
<i>Palaequium hornei</i>	1417	4	0.5	0.2	—0.1	0.1	0.2	Durable	
<i>Eucalyptus microcorys</i> †	—	5	0.6	1.2	0.2	0.5	0.6		
<i>Intsia bijuga</i>	1421	4	2.4	0.2	0.0	0.2	0.7		
<i>Fagraea gracilipes</i>	1422	2	0.9	1.2	1.6	1.8	1.4		
<i>Tectona grandis</i> †	—	5	2.6	2.0	1.2	0.3	1.5		
<i>Syzygium</i> spp.‡	1406	14	6.7	3.3	0.7	6.1	4.2	Moderately durable	
<i>Eucalyptus obliqua</i> †	—	5	9.2	1.5	0.1	14.9	6.4		
<i>Dacrydium</i> spp.‡	1419	3	6.2	10.1	1.8	8.3	6.6		
<i>Podocarpus nerifolius</i>	1414	4	4.4	1.0	7.8	16.6	7.4		
<i>Garcinia myrtifolia</i>	1408	5	13.2	8.8	1.9	6.9	7.7		
<i>Heritiera ornithocephala</i>	1416	5	13.9	9.0	2.3	6.3	7.9		
<i>Swietenia macrophylla</i>	1401	5	19.5	5.4	2.6	5.1	8.2		
<i>Palaequium fidiense</i> †	1411	5	15.7	10.0	2.7	6.3	8.7		
<i>Serianthes myriadenia</i>	1410	5	26.0	9.1	6.3	14.1	13.9		Slightly durable
<i>Pseudotsuga menziesii</i> †	—	5	10.6	4.4	19.0	32.2	16.6		
<i>Calophyllum</i> spp.‡	1404	5	22.6	14.2	8.7	21.4	16.7		
<i>Casuarina nodiflora</i> †	1420	4	19.7	26.5	5.1	18.2	17.4		
<i>Eucalyptus citriodora</i>	1405	4	24.4	27.9	7.8	18.6	19.7		
<i>Decussocarpus vitiensis</i>	1413	5	13.3	21.2	17.8	27.8	20.0	Non-durable	
<i>Alphitonia zizyphoides</i>	1424	2	32.9	33.8	10.3	10.6	21.9		
<i>Agathis vitiensis</i>	1412	5	21.5	24.0	28.7	27.0	25.3		
<i>Parinari insularum</i>	1409	5	29.6	31.7	16.9	27.4	26.4		
<i>Terminalia pterocarpa</i>	1418	4	40.6	32.6	17.2	25.0	28.8		
<i>Gonystylus punctatus</i>	1415	4	29.3	32.0	28.6	31.0	30.2		
<i>Dacrycarpus imbricatus</i>	1426	3	22.0	32.0	35.8	31.3	30.3		
<i>Pinus radiata</i> (sapwood)†	—	5	23.7	27.2	33.1	39.7	30.9		
<i>Canarium</i> spp.‡	1407/1425	5	48.0	28.9	24.7	30.4	33.0		
<i>Endospermum macrophyllum</i>	1403	5	41.9	44.0	33.8	36.4	39.0		
<i>Myristica</i> spp.‡	1402	5	54.1	44.2	29.0	39.6	41.7		
<i>Trichospermum richii</i>	1423	4	60.7	55.7	31.4	46.1	48.5		

* Mean percentage weight loss of inner and outer heartwood blocks from two to 14 trees of each species.

† Reference timbers of known durability included for comparison.

‡ Groups consisting of more than one botanical species but regarded as one commercial group (see Table 7).

TABLE 5
DECAY RESISTANCE OF FIJIAN TIMBERS—SECOND TEST

Timber Species	DFP Shipment No.	No. of Trees Tested	Mean Percentage Weight Loss* Caused by:				Mean	Laboratory Rating
			<i>Fomes lividus</i>	<i>Pycnopus coccineus</i>	<i>Lenzites trabea</i>	<i>Coniophora olivacea</i>		
<i>Eucalyptus microcoryst</i> †	—	5	1.4	0.5	0.3	0.5	0.7	Durable
<i>Fagraea gracilipes</i>	1422	3	0.4	0.9	1.1	1.1	0.8	
<i>Tectona grandist</i> †	—	5	2.7	2.2	0.1	—0.3	1.2	
<i>Bischofia javanica</i>	1551	5	1.2	2.3	—0.2	5.5	2.2	Moderately durable
<i>Planchonella vitiensis</i>	1557	5	12.4	15.8	5.8	6.5	10.1	Slightly durable
<i>Metrosideros collina</i>	1556	5	11.4	21.1	2.3	11.4	11.6	
<i>Dysoxylum</i> spp.‡	1552	5	14.1	14.2	4.8	17.6	12.7	
<i>Maniltoa</i> spp.‡	1553	5	11.7	20.3	4.6	15.2	13.0	
<i>Eucalyptus obliqua</i> †	—	5	20.8	11.3	1.4	19.0	13.1	
<i>Pseudotsuga menziesii</i> †	—	5	9.0	3.2	10.5	30.4	13.3	
<i>Acacia richii</i>	1559	5	25.3	21.4	2.8	22.4	18.0	Non- durable
<i>Eucalyptus deglupta</i>	1560	5	31.4	39.7	14.3	30.3	28.9	
<i>Pinus radiata</i> (sapwood)†	—	5	20.2	33.4	28.7	39.4	30.4	

* Mean percentage weight loss of inner and outer heartwood blocks from three to five trees of each species.

† Reference timbers of known durability included for comparison.

‡ Groups consisting of more than one botanical species but regarded as one commercial group (see Table 7).

TABLE 6
DECAY RESISTANCE OF SOLOMON ISLAND TIMBERS

Timber Species	DFP Shipment No.	No. of Trees Tested	Mean Percentage Weight Loss* Caused by:					Mean	Laboratory Rating
			<i>Fomes lividus</i>	<i>Pycnoporus coccineus</i>	<i>Lenzites trabeca</i>	<i>Coniophora olivacea</i>			
<i>Burckella obovata</i>	1615	5	1.4	-1.2	-0.5	-0.1	-0.1	Durable	
<i>Eucalyptus microcorys</i> †	—	5	0.9	-0.1	0.1	0.6	0.4		
<i>Palaquium</i> spp.†	1610	5	4.2	-1.4	-0.2	-0.9	0.4		
<i>Eugenia onesima</i>	1627	3	2.0	-0.9	-1.2	3.8	0.9		
<i>Tectona grandis</i> †	—	5	4.0	-0.7	1.6	0.4	1.3		
<i>Anoora cucullata</i>	1618	3	4.5	-1.2	-0.6	8.0	2.7	Moderately durable	
<i>Cataphyllum kajewskii</i>	1600	5	-0.8	-1.8	1.1	13.4	3.0		
<i>Gmelina moluccana</i>	1606	5	2.2	-1.6	3.5	8.6	3.2		
<i>Eugenia tierneyana</i>	1630	2	6.4	1.2	0.8	8.8	4.3		
<i>Planchonella firma</i> †	1625	3	10.3	-0.4	8.6	18.2	9.2	Slightly durable	
<i>Eucalyptus obliqua</i> †	—	5	13.7	7.3	2.0	19.3	10.6		
<i>Maranthes corymbosa</i>	1624	3	11.5	2.2	7.0	21.6	10.6		
<i>Pseudotsuga menziesii</i> †	—	5	4.5	1.6	9.9	27.8	11.0		
<i>Tristropis acutangula</i>	1632	3	7.3	1.6	19.2	29.9	12.8		
<i>Parinari salomonensis</i>	1622	3	13.8	2.7	12.2	25.7	13.6		
<i>Dysoxylum</i> spp.†	1631	3	20.2	4.6	8.6	30.0	15.8		
<i>Pinus radiata</i> (sapwood)†	—	5	10.8	9.2	33.7	44.2	24.5	Non-durable	

* Mean percentage weight loss of inner and outer heartwood from two to five trees of each species.

† Reference timbers of known durability included for comparison.

‡ Group consisting of more than one botanical species but regarded as one commercial group (see Table 7).

international reputation for durability, although it may not give extremely long service in the ground. The “moderately durable” species are comparable in resistance to *Eucalyptus obliqua* L’Herit. (messmate) which has been used extensively in south-eastern Australia in situations of moderately high decay hazard, and gives reasonable service even in ground contact.

The “slightly durable” species appear to be too susceptible to decay for satisfactory use in ground contact or in other situations of high decay hazard. They may be compared with *Pseudotsuga menziesii* (Mirb.) Franco (Douglas fir) which has low durability in the ground, but which gives satisfactory service in exposed woodwork not in ground contact. The “non-durable” timbers may be compared with sapwood of *Pinus radiata* D. Don (radiata pine) which is unsatisfactory for any external unprotected use in humid climatic conditions.

III. COLLATED INFORMATION ON DURABILITY RATINGS

Table 7 lists all the timber species tested in the laboratory together with relevant experimental information. Wherever possible, durability assessments from other sources have been included as additional information and for comparison with the laboratory ratings. Samples of a number of other timber species were also received but were not tested as, in most cases, closely related species had been evaluated or else previous information suggested that the timber would not be durable. However, as there is very little information readily accessible on most of these timbers, they are included in the list together with any durability assessments available from other sources.

The timbers are listed in Table 7 in alphabetical order of their generic names. Table 8 cross-references common names to these botanical names. Botanical names, authorities, and standard trade common names are listed according to Australian Standard 0118-1968 (Standards Association of Australia 1968). Other common names, where available, are included, but only those used in the country from which our samples were received. These are listed according to the Australian Standard 0118-1968, Whitmore (1966), and Territory of Papua and New Guinea, Department of Forests (1967).

(a) *Durability Ratings by Previous Authors*

Natural durability information from four sources has been included in Table 7. Ratings from Territory of Papua and New Guinea, Department of Forests (1967), are listed as:

- T1 “very durable, suitable for long-term use in the ground”;
- T2 “durable, suitable for use in the ground and for unprotected exterior use in buildings”;
- T3 “moderately durable, suitable for protected exterior work and for interior use”;
- T4 “non-durable, not suitable for exterior use unless treated”.

These ratings are based on the resistance of untreated heartwood to attack by wood-destroying fungi and termites. Whilst they are not to be regarded as completely authoritative ratings, they give some indication of likely resistance.

Ratings from Colwell (1965) are listed as C1–C5 and are based on the results of graveyard tests conducted in New Guinea:

- C1 “survival in excess of 60 months”;
- C2 “general survival after 36 months but subject to general deterioration”;
- C3 “complete ground level failure within 24–36 months”;
- C4 “complete ground level failure within 12–24 months”;
- C5 “complete ground level failure within 12 months”.

Ratings based on graveyard tests are listed by Alston (1966) for Fijian timbers, heartwood stakes (2 ft by 2 in. by 2 in.) having been used. His ratings are:

- A1 “very durable, average life of stakes over 10 years”;
- A2 “durable, average life of stakes 5–10 years”;
- A3 “non-durable, average life of stakes 2–5 years”;
- A4 “perishable, average life of stakes 2 years or less”.

Richardson (1967) listed the durability of a number of West Irian timbers and these are noted as R1–R5 and are as follows:

Class	Life Expectancy (yr)		
	In Contact with Soil	Exposed, No Soil Contact	Unexposed
R1	8	20	Unlimited
R2	5	15	Unlimited
R3	3	10	Unlimited*
R4	—	A few years*	10
R5	—	—	—

*If protected from moisture.

(b) Utilization of Timbers

In the utilization of these rain-forest timbers other major factors besides durability should also be considered and extensive investigations are proceeding within the Division of Forest Products on such aspects as sapwood susceptibility to *Lyctus* borer, treatability of heartwood, and mechanical properties (Bolza and Kloot 1966). Some general publications collating these data for individual timbers have been prepared by the respective forestry departments.

IV. ACKNOWLEDGMENTS

The author wishes to acknowledge the collaboration of the forestry departments of the Territory of Papua and New Guinea, of the Fiji Islands, and of the British Solomon Islands Protectorate in collecting material for this investigation; and to thank the following: the Royal Botanic Gardens, Kew, and Department of Forests, Lae, TPNG, for identifying specimens; Miss N. Ditchburne, Division of Mathematical Statistics, CSIRO, for carrying out the statistical analyses; Mr. E. W. B. Da Costa, Mrs. E. Bolza, and Miss M. E. Parsons for discussion and assistance in collating information; and Mr. J. M. Stephenson and Miss M. A. Tighe for technical assistance.

TABLE 7

DURABILITY RATINGS OF RAIN-FOREST TIMBERS

Origin: TPNG, Territory of Papua and New Guinea; Fiji, Fiji Islands; BSIP, British Solomon Islands Protectorate. Other trade names for country of origin of test material also given. Durability ratings by previous authors (pp. 11, 12): T1-T4 from TPNG, Department of Forests (1967); C1-C5 from Colwell (1965); A1-A4 from Alston (1966); R1-R5 from Richardson (1967). Ratings in parenthesis to be regarded with some caution either because they are: *a*, general rating for genus; *b*, rating for related species; or *c*, rating regarded by its authors as uncertain. n.t., material not tested

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Acacia richii</i> A. Gray	Leguminosae (Mimosoideae)	qumu		Fiji		1559	5	Slightly durable
<i>Acicalyptus elliptica</i> A. C. Smith—see <i>Syzygium</i> spp. (yasi-yasi II)				Fiji		1406		
<i>Acicalyptus eugenioides</i> (Seem.) Drake—see <i>Syzygium</i> spp. (yasi-yasi II)				Fiji		1406		
<i>Acicalyptus longiflora</i> A. C. Smith—see <i>Syzygium</i> spp. (yasi-yasi II)				Fiji		1406		
<i>Agathis dammara</i> (A. B. Lamb.) L. C. Rich. [syn. <i>A. alba</i> (A. B. Lamb.) Foxw.]	Araucariaceae	East Indian kauri	kauri pine	TPNG	T4	1490	n.t.	
<i>Agathis vitiensis</i> (Seem.) Drake	Araucariaceae	Fijian kauri	dakua makadre	Fiji	A3	1412	5	Non-durable
<i>Ailanthus peckelii</i> Melch.	Simarubaceae	white siris		TPNG	T4, C3	1380	5	Non-durable
<i>Albizia falcata</i> (L.) Backer ex Merr.	Leguminosae (Mimosoideae)	NG albizzia		TPNG	T4, R4-5	1319	5	Non-durable
<i>Albizia falcata</i> (L.) Backer ex Merr.—see <i>Albizia</i> spp.				BSIP		1614		
<i>Albizia minahassae</i> Koord.—see <i>Albizia</i> spp.				BSIP		1614		
<i>Albizia</i> spp.				BSIP	(T4) ^a	1614	n.t.	
<i>A. falcata</i> (L.) Backer ex Merr.	Leguminosae (Mimosoideae)	BSIP albizzia	fai, gaganu, mamafai	BSIP				
<i>A. minahassae</i> Koord. (regarded as one commercial group)								
<i>Alphitonia zizyphoides</i> (Spreng.) A. Gray	Rhamnaceae	doi		Fiji	(T4) ^a	1424	2	Slightly durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DSP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	white cheesewood	milkwood, milky pine	TPNG	T4, R5	1303	n.t.	
<i>Alstonia scholaris</i> (L.) R. Br.	Apocynaceae	white cheesewood	aitonga, suaia, taba'a	BSIP	T4, R5	1609	n.t.	
<i>Alstonia spectabilis</i> (L.) R. Br.	Apocynaceae	cheesewood	gwatasaliu, siliu'u	BSIP	T2-3, R3	1620	n.t.	
<i>Amoora cucullata</i> Roxb.	Meliaceae	NG amoora		TPNG	(T3-4) ^c , (R2-3) ^a	1310	5	Slightly durable
<i>Amoora cucullata</i> Roxb.	Meliaceae	BSIP amoora		BSIP	(T3-4) ^c , (R2-3) ^a	1618	3	Moderately durable
<i>Anisoptera polyandra</i> Bl.	Dipterocarpaceae	garawa	anisoptera	TPNG	T3, C2, R4	1316	5	Slightly durable
<i>Anthocephalus chinensis</i> (Lam.) A. Rich.	Rubiaceae	laran	labula	TPNG	T4, R5	1328	5	Non-durable
ex Walp. [syn. <i>A. cadamba</i> (Roxb.) Miq.]								
<i>Antiaris toxicaria</i> (Rumph. ex Pers.) Lesch.	Moraceae	NG antiaris		TPNG	T4	1314	n.t.	
<i>Araucaria hunsteinii</i> K. Schum. (syn. <i>A. klinkii</i> Lauterb.)	Araucariaceae	klinki pine	Bulolo pine, pai, rassu	TPNG	T4	—	5	Non-durable
<i>Archidendron oblongum</i> (Hemsl.) de Wit	Leguminosae (Mimosoideae)	lamilami		BSIP		1623	n.t.	
<i>Barringtonia edulis</i> Seem.	Lecythidaceae	vutu		Fiji	A4, (T4) ^b	1555	n.t.	
<i>Bischofia javanica</i> Bl.	Euphorbiaceae	bishop wood	koka	Fiji	T3, A2, R2	1551	5	Moderately durable
<i>Brachychiton carruthersii</i> F. Muell.	Sterculiaceae	NG brachychiton		TPNG	(T3) ^c	1481	n.t.	
<i>Bridelia minutiflora</i> Hook. f.	Euphorbiaceae	bridelia	scrub ironbark	TPNG	R3	1497	n.t.	
<i>Buchanania macrocarpa</i> Lauterb.	Anacardiaceae	buchanania	pink satinwood	TPNG	(T4) ^a , (R4) ^a	1307	5	Non-durable
<i>Burckella obovata</i> (Forst.) Pierre	Sapotaceae	BSIP burckella	faigona, kona	BSIP	(T4) ^c , (R4) ^a	1615	5	Durable
<i>Calophyllum kajewskii</i> A. C. Smith	Guttiferae	BSIP calophyllum	ba'ula	BSIP	(R2-4) ^a	1600	5	Moderately durable
<i>Calophyllum leucocarpum</i> A. C. Smith—see <i>Calophyllum</i> spp.				Fiji		1404		
<i>Calophyllum papuanum</i> Lauterb.	Guttiferae	NG calophyllum	island cedar, bush calophyllum	TPNG	T3, (R2-4) ^a	1315	5	Slightly durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Calophyllum vitiense</i> Turr.	Guttiferae	BSIP	gwaragwaro	BSIP	(R2-4) ^a	1607	n.t.	
<i>Calophyllum vitiense</i> Turr.—see <i>Calophyllum</i> spp.		calophyllum		Fiji		1404		
<i>Calophyllum</i> spp.								
<i>C. leucocarpum</i> A. C. Smith	Guttiferae	Fijian	damanu	Fiji	A3, (R2-4) ^a	1404	2 } Slightly durable 3 }	
<i>C. vitiense</i> Turr. (regarded as one commercial group)		calophyllum						
<i>Camposperma brevipetiolata</i> Volkens	Anacardiaceae	camposperma	karamati,	TPNG	T4, R5	1329	n.t.	
<i>Camposperma brevipetiolata</i> Volkens	Anacardiaceae	camposperma	karamut					
<i>Canarium indicum</i> L.	Burseraceae	galip	ketekete	BSIP	T4, R5	1602	n.t.	
<i>Canarium oleosum</i> (Lam.) Engl.	Burseraceae	NG canarium		TPNG	T4, R4-5	1381	n.t.	
<i>Canarium salomonense</i> Burtt.	Burseraceae	BSIP	adoa	BSIP	R4, (T4) ^a	1331	5	Non-durable
		canarium			(T4) ^a	1612	n.t.	
<i>Canarium smithii</i> Leenh.—see <i>Canarium</i> spp. No. 1407/1425				Fiji		1407 } 1425 }		
<i>Canarium vitiense</i> A. Gray—see <i>Canarium</i> spp. No. 1407/1425				Fiji		1407		
<i>Canarium vitiense</i> A. Gray—see <i>Canarium</i> spp. No. 1628				BSIP		1628		
<i>Canarium</i> sp. aff. <i>C. vitiense</i> A. Gray—see <i>Canarium</i> spp. No. 1407/1425				Fiji		1407		
<i>Canarium</i> spp.								
<i>C. smithii</i> Leenh.	Burseraceae	Fijian	kaunicina- kaunigai	Fiji	A3, (T4) ^a	1407 } 1425 }	3 } Non-durable 1 } 1 }	
<i>C. vitiense</i> A. Gray		canarium						
<i>Canarium</i> sp. aff. <i>C. vitiense</i> A. Gray (regarded as one commercial group)								
<i>Canarium</i> spp. (includes <i>C. vitiense</i> A. Gray) (regarded as one commercial group)	Burseraceae	BSIP	malangali, bulangali	BSIP	(T4) ^a	1628	n.t.	
		canarium						

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Castanopsis acuminatissima</i> (Bl.) A. DC. ex Hance	Fagaceae	NG oak		TPNG	(T2-3) ^c	1494	5	Slightly durable
<i>Casuarina nodiflora</i> Forst. (includes <i>Gymnostoma vitense</i> L. A. S. Johnson) (regarded as one commercial group)	Casuarinaceae	Fijian beach she-oak	velau	Fiji	A3, (T2-3) ^b	1420	3 } 1 }	Slightly durable
<i>Cathormion umbellatum</i> (Vahl.) Kosterm.	Leguminosae (Mimosoideae)	cathormion		TPNG		1482	5	Durable
<i>Cedrela toona</i> Roxb. ex Rottl. et Willd.—see <i>Toona sureni</i>				TPNG		1309		
<i>Celtis latifolia</i> (Bl.) Planch.	Ulmaceae	BSIP celtis	la'usi	BSIP	T4, R4-5	1619	n.t.	
<i>Celtis nyanianii</i> K. Schum.	Ulmaceae	NG celtis		TPNG	T4, C4	1372	5	Non-durable
<i>Celtis philippinensis</i> Blanco	Ulmaceae	BSIP celtis	laelae	BSIP	T4	1617	n.t.	
<i>Chisocheton schumanii</i> C. DC.	Meliaceae	kiso	chisocheton	TPNG	T4, (R4) ^a	1387	5	Non-durable
<i>Chisocheton</i> sp.	Meliaceae	kiso	chisocheton	TPNG	(T4) ^a , (R4) ^a	1359	5	Non-durable
<i>Cinnamomum</i> sp.	Lauraceae	NG cordia	cinnamomum	TPNG	C3, (T3) ^b	1354	5	Moderately durable
<i>Cordia dichotoma</i> Forst.	Boraginaceae			TPNG	T4	1389	5	Slightly durable
<i>Cryptocarya</i> spp.	Lauraceae	moustiquaire	cryptocarya	TPNG	T3-4, R4-5	1355	2	Non-durable
<i>Cynometra insularis</i> A. C. Smith—see <i>Maniltoa</i> spp.				Fiji		1553		
<i>Dacrycarpus imbricatus</i> var. <i>patulus</i> de Laubenfels [formerly <i>Podocarpus imbricatus</i> Bl. (syn. <i>P. javanicus</i> Bl.)]	Podocarpaceae	red podocarp	amunu	Fiji		1426	3	Non-durable
<i>Dacrydium nausoriensis</i> de Laubenfels—see <i>Dacrydium</i> spp.				Fiji		1419		
<i>Dacrydium nidulum</i> var. <i>nidulum</i> de Laubenfels—see <i>Dacrydium</i> spp.				Fiji		1419		
<i>Dacrydium</i> spp. (formerly cited as <i>D. elatum</i> Wall.). Consists of <i>D. nausoriensis</i> de Laubenfels and <i>D. nidulum</i> var. <i>nidulum</i> de Laubenfels (regarded as one commercial group)	Podocarpaceae	dacrydium	yaka	Fiji	A2, (T2-3) ^b	1419	3	Moderately durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Decussocarpus vitensis</i> (Seem.) de Laubenfels, comb. nov. (formerly <i>Podocarpus vitensis</i> Seem.)	Podocarpaceae	dakua salusalu, red podocarp		Fiji	A3	1413	5	Slightly durable
<i>Degeneria vitensis</i> I. W. Bailey et A. C. Smith	Degeneriaceae	masiratu		Fiji		1561	n.t.	
<i>Dillenia salomonensis</i> (C. T. White) Hoogl.	Dilleniaceae	dillenia	mudi	BSIP	(T4) ^a , (R3-5) ^a	1604	n.t.	
<i>Diospyros</i> sp.	Ebenaceae	NG ebony	tumi	TPNG	(T3) ^b , (R5) ^a	1398	5	Non-durable
<i>Dracontomelum mangiferum</i> Bl.	Anacardiaceae	NG walnut	Pacific walnut	TPNG	T3, R3-4	1311	5	Non-durable
<i>Drypetes</i> spp.	Euphorbiaceae	NG drypetes		TPNG	R3	1391	5	Slightly durable
<i>Duabanga moluccana</i> Bl.	Sonneratiaceae	NG duabanga		TPNG	T4	1318	5	Non-durable
<i>Dysoxylum quercifolium</i> (Seem.) A. C. Smith.—see <i>Dysoxylum</i> spp.				Fiji		1552		
<i>Dysoxylum richii</i> (A. Gray) C. DC.—see <i>Dysoxylum</i> spp.				Fiji		1552		
<i>Dysoxylum</i> sp.	Meliaceae	NG mahogany dysoxylum		TPNG	(T2-3) ^a , (C2) ^a , (R2-3) ^a	1390	5	Moderately durable
<i>Dysoxylum</i> spp.	Meliaceae	sasauira		Fiji	(T2-3) ^a , (C2) ^a , (R2-3) ^a	1552	3 2	Slightly durable
<i>D. quercifolium</i> (Seem.) A. C. Smith								
<i>D. richii</i> (A. Gray) C. DC. (regarded as one commercial group)								
<i>Dysoxylum</i> spp.								
<i>Elaeocarpus sphaericus</i> (Gaertn.) K. Schum.	Elaeocarpaceae	sasauira	airande	BSIP	(T2-3) ^a , (C2) ^a , (R2-3) ^a	1631	3	Slightly durable
<i>Elaeocarpus sphaericus</i> (Gaertn.) K. Schum.	Elaeocarpaceae	NG quandong		TPNG	T4, C4, (R5) ^a	1337	5	Non-durable
	Elaeocarpaceae	BSIP quandong	milo	BSIP	T4, C4, (R5) ^a	1608	n.t.	

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Elmerrillia papuana</i> (Schlecht.) Dandy	Magnoliaceae	Wau beech	hui, elmerril	TPNG	T2, R2	1358	5	Moderately durable
<i>Endospermum macrophyllum</i> (Muell. Arg.) Pax et Hoffm. (Test specimens may have included sapwood)	Euphorbiaceae	Fijian basswood	kauvula, Fijian white silkwood	Fiji	A4	1403	5	Non-durable
<i>Endospermum medulosum</i> Becc. (Test specimens may have included sapwood)	Euphorbiaceae	NG basswood		TPNG	T4	1321	5	Non-durable
<i>Endospermum medulosum</i> Becc.	Euphorbiaceae	BSIP	a'asa	BSIP	T4	1605	n.t.	
<i>Eucalyptus citriodora</i> Hook.	Myrtaceae	basswood lemon-scented gum	citriodora	Fiji (plntn)		1405	4	Slightly durable
<i>Eucalyptus deglupta</i> Bl.	Myrtaceae	kamarere		TPNG	T3	1320	5	Slightly durable
<i>Eucalyptus deglupta</i> Bl.	Myrtaceae	kamarere	deglupta	Fiji (plntn)	T3	1560	5	Non-durable
<i>Eugenia effusa</i> A. Gray—see <i>Syzygium</i> spp. (yasi-yasi I)				Fiji		1406		
<i>Eugenia onesima</i> (Merr. et Perry) Whitmore	Myrtaceae	obah	aibu, aimela	BSIP	(T2-3) ^a , (R2-3) ^a	1627	3	Durable
<i>Eugenia tierneyana</i> F. Muell.	Myrtaceae	obah	aifau, rufa, malamalarufa	BSIP	(T2-3) ^a , (R2-3) ^a	1630	2	Moderately durable
<i>Eugenia</i> sp.	Myrtaceae	obah	watargum, NG satinash	TPNG	(T2-3) ^a , (R2-3) ^a	1382	5	Moderately durable
<i>Fagraea gracilipes</i> A. Gray	Loganiaceae	buabua		Fiji	A1, (T3) ^a	1422	5	Durable
<i>Flindersia amboinensis</i> Poir.	Rutaceae	NG silver ash	NG maple	TPNG	T3-4, (R4-5) ^a	1373	5	Non-durable
<i>Flindersia heterophylla</i> Merr. et Perry	Rutaceae	NG maple	scented maple	TPNG	T3-4, (R4-5) ^a	1323	n.t.	
<i>Flindersia pimenteliana</i> F. Muell.	Rutaceae	NG maple	silkwood maple	TPNG	T3-4, (R4-5) ^a	1317	4	Non-durable
<i>Ganophyllum falcatum</i> Bl.	Sapindaceae	scaly ash		TPNG	T3, R3	1386	5	Moderately durable
<i>Garcinia myrtifolia</i> A. C. Smith	Guttiferae	mangosteen	laubu, kandis	Fiji	A3, (T3) ^a	1408	5	Moderately durable
<i>Garuga floribunda</i> Decne.	Burseraceae	garuga		TPNG	T4	1332	5	Durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DSP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Gmelina moluccana</i> (Bl.) Backer ex K. Hayne	Verbenaceae	white beech		TPNG	(T3-4) ^c , R5	1374	2	Moderately durable
<i>Gmelina moluccana</i> (Bl.) Backer ex K. Hayne (syn. <i>G. salomonensis</i> Bakh.)	Verbenaceae	white beech	arokoko	BSIP	(T3-4) ^c , R5	1606	5	Moderately durable
<i>Gonystylus macrophyllus</i> (Miq.) Airy Shaw	Gonystylaceae	BSIP ramin	nunura	BSIP	T4	1621	n.t.	
<i>Gonystylus punctatus</i> A. C. Smith	Gonystylaceae	Fijian ramin	navota	Fiji	A4	1415	4	Non-durable
<i>Gymnostoma vittense</i> L. A. S. Johnson—see <i>Casuarina nodiflora</i>				Fiji		1420		
<i>Heritiera ornithocephala</i> Kosterm.	Sterculiaceae	rosarosa		Fiji	A2, (T2-4) ^b	1416	5	Moderately durable
<i>Heritiera</i> sp. cf. <i>H. littoralis</i> Ait.	Sterculiaceae	NG heritiera		TPNG	(T2-4) ^b	1394	5	Slightly durable
<i>Homalium foetidum</i> (Roxb.) Benth. (syn. <i>H. luzoniense</i> F. Vill.)	Flacourtiaceae	malas		TPNG	T2-3, R1-2	1352	5	Moderately durable
<i>Hopea iriana</i> van Sloot.	Dipterocarpaceae	giam	hopea	TPNG	C1, (T2) ^a , (R1) ^a	1335	5	Durable
<i>Horsfieldia irya</i> (Gaertn.) Warb.	Myristicaceae	nutmeg		TPNG	T4, (R5) ^a	1397	n.t.	
<i>Intsia bijuga</i> (Colebr.) O. Kuntze	Leguminosae (Caesalpinioideae)	kwila		TPNG	T1, C1, A2, (R1) ^a	1300	5	Durable
<i>Intsia bijuga</i> (Colebr.) O. Kuntze	Leguminosae (Caesalpinioideae)	kwila	vesi	Fiji	T1, C1, A2, (R1) ^a	1421	4	Durable
<i>Kermadecia viliensis</i> Turr.	Proteaceae	kauceuti		Fiji	A3	1554	n.t.	
<i>Mangifera minor</i> Bl.	Anacardiaceae	mango		TPNG	T4, C4	1313	n.t.	
<i>Manilkara kanosensis</i> H. J. Lam. et B. Meeuse	Sapotaceae	manikara		TPNG	T1-3	1483	2	Durable
<i>Maniltoa grandiflora</i> (A. Gray) Scheff.—see <i>Maniltoa</i> spp.				Fiji		1553		
<i>Maniltoa minor</i> A. C. Smith—see <i>Maniltoa</i> spp.				Fiji		1553		
<i>Maniltoa psilogyne</i> Harms	Leguminosae (Caesalpinioideae)	maniltoa		TPNG	T2-3	1395	5	Slightly durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Manittoa</i> spp.	Leguminosae (Caesalpinioideae)	manittoa	moivi	Fiji	(T2-3) ^a	1553	2	Slightly durable
<i>M. grandiflora</i> (A. Gray) Scheff.							1	
<i>M. minor</i> A. C. Smith					(T4) ^a		2	
<i>Cynometra insularis</i> A. C. Smith (regarded as one commercial group)	Rosaceae		aisiksiki	BSIP		1624	3	Slightly durable
<i>Maranthes corymbosa</i> Bl.	Rubiaceae	garo-garo		TPNG	T2, R3	1393	5	Non-durable
<i>Mastixiodendron pachyclados</i> (K. Schum.) Melch.	Myrtaceae	vuga		Fiji	(R1) ^a	1556	5	Slightly durable
<i>Metrosideros collina</i> (J. R. & G. Forst.) A. Gray (includes several varieties, mainly <i>M. collina</i> var. <i>vitiensis</i> A. Gray) (regarded as one commercial group)								
<i>Myristica buchneriana</i> Warb.	Myristicaceae	nutmeg		TPNG Fiji	T4	1360	5	Non-durable
<i>Myristica castanefolia</i> A. Gray—see <i>Myristica</i> spp.						1402		
<i>Myristica charitacea</i> Gillespie—see <i>Myristica</i> spp.						1402		
<i>Myristica hypargyrea</i> A. Gray—see <i>Myristica</i> spp.						1402		
<i>Myristica</i> spp.	Myristicaceae	nutmeg	kaudamu, Fijian pencil cedar	Fiji	A4, (T4) ^a	1402	1	Non-durable
<i>M. castanefolia</i> A. Gray							2	
<i>M. charitacea</i> Gillespie							2	
<i>M. hypargyrea</i> A. Gray (regarded as one commercial group)								
<i>Neonauclaea papuana</i> (Valeton) Merr. et Perry	Rubiaceae	yellow hardwood		TPNG	(T2-3) ^a	1366	3	Moderately durable
<i>Neoscortechinia forbesii</i> (Hook. f.) C. T. White	Euphorbiaceae	aiasila		BSIP		1626	n.t.	
<i>Neuburgia corynocarpa</i> (A. Gray) Leenh.	Loganiaceae	neuburgia		TPNG	T4	1492	n.t.	
<i>Nothofagus perryi</i> Steen.	Fagaceae	NG beech	gripe	TPNG	(T2-3) ^c	1495	5	Moderately durable
<i>Nothofagus perryi</i> Steen.	Fagaceae	NG beech	gripe	TPNG	(T2-3) ^c	1491	n.t.	

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Octomeles sumatrana</i> Miq.	Datiaceae	erima	ilimo	TPNG BSIP	T4, C5, R5	1302 1625	5	Non-durable
<i>Palaquium amboinense</i> Burck.—see <i>Planchonella firma</i>								
<i>Palaquium fijiense</i> Pierre (includes <i>Palaquium</i> sp. nov.) (regarded as one commercial group)	Sapotaceae	bauvudi	Fijian maple	Fiji	A4, (T4) ^a , (R4) ^a	1411	4 } 1 }	Moderately durable
<i>Palaquium hornei</i> (Hartog ex Baker) Dub.	Sapotaceae	Fijian palaquium	sacau, red silkwood	Fiji	A2, (T4) ^a (R4) ^a	1417	4	Durable
<i>Palaquium</i> spp.	Sapotaceae	BSIP palaquium	faibaru, maliolo	BSIP	(T4) ^a , (R4) ^a	1610	5	Durable
<i>Parinari insularum</i> A. Gray	Rosaceae	Fijian parinari	sa	Fiji	A4, (T2) ^b	1409	5	Non-durable
<i>Parinari salomonensis</i> C. T. White	Rosaceae	BSIP parinari	malaone, one one	BSIP	(T2) ^b	1622	3	Slightly durable
<i>Pimeleodendron amboinicum</i> Hassk.	Euphorbiaceae	pimeleodendron		TPNG	T4, C4, R5	1340	n.t.	
<i>Planchonella firma</i> (Miq.) Dub. and <i>Palaquium amboinense</i> Burck. (regarded as one commercial group)	Sapotaceae	BSIP planchonella	faibaru, maliolo, oora, ororo	BSIP	(T3-4) ^a , (R4-5) ^a	1625	2 } 1 }	Slightly durable
<i>Planchonella kaernbachiana</i> (Engl.) H. J. Lam.	Sapotaceae	NG planchonella	red silkwood	TPNG	(T3-4) ^c , (R4-5) ^a	1326	4	Non-durable
<i>Planchonella thyrsoides</i> C. T. White	Sapotaceae	BSIP planchonella	kete	BSIP	(T3-4) ^a , (R4-5) ^a	1616	n.t.	
<i>Planchonella torricellensis</i> (K. Schum.) H. J. Lam.	Sapotaceae	NG planchonella	red silkwood	TPNG	T3-4, (R4-5) ^a	1368	5	Slightly durable
<i>Planchonella vitensis</i> Gillespie	Sapotaceae	Fijian planchonella	sarosaro	Fiji	(T3-4) ^a , (R4-5) ^a	1557	5	Slightly durable
<i>Planchonia papuana</i> R. Knuth	Lecythidaceae	planchonia		TPNG	T3	1357	5	Moderately durable
<i>Pleogynium timoriense</i> (DC.) Leenh.	Anacardiaceae	pleiogynium		TPNG		1399	5	Durable
<i>Podocarpus amarus</i> Bl.	Podocarpaceae	black pine	podocarp	TPNG	T4, (R2-3) ^a	1361	3	Non-durable

† R4 refers only to *P. amboinense*.

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Podocarpus imbricatus</i> Bl. (syn. <i>P. javanicus</i> Bl.)—see <i>Dacrycarpus imbricatus</i>				Fiji		1426		
<i>Podocarpus nerifolius</i> D. Don	Podocarpaceae	Fijian podocarp	kuasi	Fiji	A2, (R2-3) ^a	1414	4	Moderately durable
<i>Podocarpus vitiensis</i> Seem.—see <i>Decussocarpus vitiensis</i>				Fiji		1413		
<i>Polyalthia oblongifolia</i> C. B. Robinson	Annonaceae	yellow lacewood		TPNG	T4, C4	1377	n.t.	
<i>Pometia pinnata</i> Forst.	Sapindaceae	taun	ako, dawa	BSIP	T3, (R3-5) ^a	1601	n.t.	
<i>Pometia tomentosa</i> (Bl.) Teysm. et Binn.	Sapindaceae	taun		TPNG	T3, (R3-5) ^a	1312	5	Slightly durable
<i>Pterocarpus indicus</i> Willd.	Leguminosae (Papilionatae)	NG rosewood		TPNG	T1, R2	1301	5	Moderately durable
<i>Pterocymbium beccarii</i> K. Schum.	Sterculiaceae	amberoi		TPNG	T4, C5	1306	5	Non-durable
<i>Pterygota horsfieldii</i> (R. Br.) Kosterm. (syn. <i>P. forbesii</i> F. Muell.)	Sterculiaceae	white tulip oak		TPNG	T3, R3-5	1369	5	Non-durable
<i>Samanea saman</i> (Jacq.) Merr. [syn. <i>Pithecellobium saman</i> (Jacq.) Benth.]	Leguminosae (Mimosoideae)	raintree	mocomoco, vaivai-ni-vaivalagi	Fiji		1558	n.t.	
<i>Schizomeria serrata</i> (Hochr.) Hochr. (syn. <i>S. floribunda</i> Schltr.)	Cunoniaceae	schizomeria	pink birch	TPNG	T4, R4-5	1383	5	Slightly durable
<i>Schizomeria serrata</i> (Hochr.) Hochr. (syn. <i>S. floribunda</i> Schltr.)	Cunoniaceae	schizomeria	beabea	BSIP	T4, R4-5	1613	n.t.	
<i>Serianthes myriadenia</i> Planch.	Leguminosae (Mimosoideae)	vaivai-ni-veikau		Fiji		1410	5	Slightly durable
<i>Sloanea forbesii</i> F. Muell.	Elaeocarpaceae	sloanea	carabeen	TPNG	T4, (R5) ^a	1385	5	Non-durable
<i>Sloanea</i> sp.	Elaeocarpaceae	sloanea	carabeen	TPNG	(T4) ^a , (R5) ^a	1384	5	Non-durable
<i>Spondias dulcis</i> Park.	Anacardiaceae	spondias		TPNG	T4	1308	5	Non-durable
<i>Sterculia shillinglawii</i> F. Muell.	Sterculiaceae	NG sterculia	lacewood	TPNG	T4	1376	n.t.	
<i>Sterculia vitiensis</i> Seem.	Sterculiaceae	Fijian sterculia	waci-waci, lacewood	Fiji	(T4) ^a	1562	n.t.	

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Swietenia macrophylla</i> King	Meliaceae	American mahogany		Fiji (plntn) Fiji	A3	1401	5	Moderately durable
<i>Syzygium brackenridgei</i> C. Muell.— see <i>Syzygium</i> spp. (yasi-yasi II)						1406		
<i>Syzygium buettnerianum</i> (K. Schum.) Nieden	Myrtaceae	NG satinash	NG watargum	TPNG	T2-3, C3	1305	5	Moderately durable
<i>Syzygium curvistylum</i> (Gill.) Merr. et Perry —see <i>Syzygium</i> spp. (yasi-yasi II)				Fiji		1406		
<i>Syzygium fijiense</i> (Gill.) Merr. et Perry —see <i>Syzygium</i> spp. (yasi-yasi II)				Fiji		1406		
<i>Syzygium nidie</i> Guill.—see <i>Syzygium</i> spp. (yasi-yasi I)				Fiji		1406		
<i>Syzygium</i> spp.								
Small-leaf group	Myrtaceae			Fiji	A2	1406		
<i>Eugenia effusa</i> A. Gray								
<i>Syzygium nidie</i> Guill.								
Medium-leaf group								
<i>Acicalyptus elliptica</i> A. C. Smith								
<i>A. eugenioides</i> (Seem.) Drake								
<i>A. longiflora</i> A. C. Smith								
<i>Syzygium brackenridgei</i> C. Muell.								
<i>S. curvistylum</i> (Gill.) Merr. et Perry								
<i>S. fijiense</i> (Gill.) Merr. et Perry (regarded as one commercial group)								
<i>Terminalia brassii</i> Exell	Combretaceae	brown		TPNG	T4	1400	n.t.	
<i>Terminalia brassii</i> Exell	Combretaceae	terminalia brown	dafo	BSIP	T4	1603	n.t.	
		terminalia						

}yasi-yasi I

}yasi-yasi II

4
3
2
1
1
1
1
1
1

Moderately durable

TABLE 7 (Continued)

Timber Species	Botanical Family	Standard Trade Common Name (AS0118-1968)	Other Trade Names	Origin of Test Material	Durability Ratings by Previous Authors	DFP Shipment No.	No. of Trees Tested	Laboratory Durability Ratings
<i>Terminalia calamansanai</i> (Blanco) Rolfe	Combretaceae	yellow terminalia	kako, kwako, sualisualo	BSIP		1611	n.t.	
<i>Terminalia complanata</i> K. Schum.	Combretaceae	yellow terminalia		TPNG	T3-4, C4	1378	4	Non-durable
<i>Terminalia kaernbachii</i> Warb.	Combretaceae	brown terminalia		TPNG	T3-4, C5	1333	5	Non-durable
<i>Terminalia pterocarpa</i> Melville et Green	Combretaceae	Indian almond	tivi	Fiji	A3	1418	4	Non-durable
<i>Terminalia</i> spp.	Combretaceae		terminalia	TPNG		1392	n.t.	
<i>Terminalia</i> spp.	Combretaceae		terminalia	TPNG		1496	n.t.	
<i>Tetrameles nudiflora</i> R. Br.	Datiaceae	tetrameles		TPNG	T4, R5	1375	5	Non-durable
<i>Toona sureni</i> Merr. (formerly <i>Cedrela toona</i> Roxb.)	Meliaceae	red cedar		TPNG	T2	1309	5	Slightly durable
<i>Trichospermum richii</i> (A. Gray) Seem.	Tiliaceae	mako		Fiji		1423	4	Non-durable
<i>Tristropsis acutangula</i> Radlk.	Sapindaceae	tristropsis		BSIP	(T4) ^b	1632	3	Slightly durable
<i>Tristropsis canarioides</i> Boerl.	Sapindaceae	tristropsis		TPNG	(T4) ^b	1388 1388A	5	Slightly durable
<i>Vitex cofassus</i> Reinw. ex Bl.	Verbenaceae	NG vitex		TPNG	T2, (R1-2) ^a	1304	5	Durable
<i>Xanthophyllum papuanum</i> Melch.	Polygalaceae	NG boxwood		TPNG	R5, (T3-4) ^{a,c}	1379	5	Moderately durable
<i>Xanthophyllum papuanum</i> Melch.	Polygalaceae	BSIP boxwood	mole	BSIP	R5, (T3-4) ^{a,c}	1629	n.t.	
<i>Xylocarpus granatum</i> Koen.	Meliaceae	cedar mangrove	lalato	BSIP	T3	1633	n.t.	

TABLE 8
INDEX OF TIMBERS LISTED IN TABLE 7
Common names are cross referenced to botanical names, those appearing in bold
type being standard trade names

Common Name	Botanical Name
a'asa	<i>Endospermum medullosum</i>
adoa	<i>Canarium salomonese</i>
aiasila	<i>Neoscortechinia forbesii</i>
aibu	<i>Eugenia onesima</i>
aifau	<i>Eugenia tierneyana</i>
aimela	<i>Eugenia onesima</i>
airande	<i>Dysoxylum</i> spp. (No. 1631)
aisiksiki	<i>Maranthes corymbosa</i>
aitonga	<i>Alstonia scholaris</i>
ako	<i>Pometia pinnata</i>
albizzia, BSIP	<i>Albizia</i> spp.
albizzia, NG	<i>Albizia falcata</i>
almond, Indian	<i>Terminalia pierocarpa</i>
amberoi	<i>Pterocymbium beccarii</i>
amoor, BSIP and NG	<i>Amoor cucullata</i> (Nos. 1618, 1310)
amunu	<i>Dacrycarpus imbricatus</i>
anisoptera, NG	<i>Anisoptera polyandra</i>
antiaris, NG	<i>Antiaris toxicaria</i>
arokoko	<i>Gmelina moluccana</i> (No. 1606)
ash, scaly	<i>Ganophyllum falcatum</i>
ash, silver, NG	<i>Flindersia amboinensis</i>
basswood, BSIP	<i>Endospermum medullosum</i> (No. 1605)
basswood, Fijian	<i>Endospermum macrophyllum</i>
basswood, NG	<i>Endospermum medullosum</i> (No. 1321)
ba'ula	<i>Calophyllum kajewskii</i>
bauvudi	<i>Palaquium fidjiense</i>
beabea	<i>Schizomeria serrata</i>
beech, NG	<i>Nothofagus perryi</i> (Nos. 1495, 1491)
beech, Wau	<i>Elmerrillia papuana</i>
beech, white	<i>Gmelina moluccana</i> (Nos. 1374, 1606)
birch, pink	<i>Schizomeria serrata</i>
bishop wood	<i>Bischofia javanica</i>
boxwood, BSIP and NG	<i>Xanthophyllum papuanum</i> (Nos. 1629, 1379)
brachychiton, NG	<i>Brachychiton carruthersii</i>
bridelia	<i>Bridelia minutiflora</i>
buabua	<i>Fagraea gracilipes</i>
buchanania	<i>Buchanania macrocarpa</i>
bulangali	<i>Canarium</i> spp. (No. 1628)
burckella, BSIP	<i>Burckella obovata</i>
calophyllum, BSIP	<i>Calophyllum kajewskii</i> , <i>C. vitiense</i>
calophyllum, bush	<i>Calophyllum papuanum</i>
calophyllum, Fijian	<i>Calophyllum</i> spp.
calophyllum, NG	<i>Calophyllum papuanum</i>
campnosperma	<i>Campnosperma brevipetiolata</i>
canarium, BSIP	<i>Canarium salomonese</i> , <i>Canarium</i> spp. (No. 1628)

TABLE 8 (Continued)

Common Name	Botanical Name
canarium, Fijian	<i>Canarium</i> spp. (No. 1407/1425)
canarium, NG	<i>Canarium oleosum</i>
carabeen	<i>Sloanea forbesii</i> , <i>Sloanea</i> sp.
cathormion	<i>Cathormion umbellatum</i>
cedar, island	<i>Calophyllum papuanum</i>
cedar, pencil, Fijian	<i>Myristica</i> spp.
cedar, red	<i>Toona sureni</i>
celtis, BSIP	<i>Celtis latifolia</i> , <i>C. philippinensis</i>
celtis, NG	<i>Celtis nyanii</i>
cheesewood	<i>Alstonia scholaris</i> , <i>A. spectabilis</i>
cheesewood, white	<i>Alstonia scholaris</i>
chisocheton	<i>Chisocheton schumannii</i> , <i>Chisocheton</i> sp
cinnamomum	<i>Cinnamomum</i> sp.
citriodora	<i>Eucalyptus citriodora</i>
cordia, NG	<i>Cordia dichotoma</i>
cryptocarya	<i>Cryptocarya</i> spp.
dacrydium	<i>Dacrydium</i> spp.
dafo	<i>Terminalia brassii</i>
dakua makadre	<i>Agathis vitiensis</i>
dakua salusalu	<i>Decussocarpus vitiensis</i>
damanu	<i>Calophyllum</i> spp.
dawa	<i>Pometia pinnata</i>
deglupta	<i>Eucalyptus deglupta</i>
dillenia	<i>Dillenia salomonensis</i>
doi	<i>Alphitonia zizyphoides</i>
drypetes, NG	<i>Drypetes</i> spp.
duabanga, NG	<i>Duabanga moluccana</i>
dysoxylum	<i>Dysoxylum</i> sp.
ebony, NG	<i>Diospyros</i> sp.
elmerrill	<i>Elmerrillia papuana</i>
erima	<i>Octomeles sumatrana</i>
fai	<i>Albizia</i> spp.
faibaru	<i>Palaquium</i> spp., <i>Planchonella firma</i>
faigona	<i>Burckella obovata</i>
gaganu	<i>Albizia</i> spp.
galip	<i>Canarium indicum</i>
garawa	<i>Anisoptera polyandra</i>
garo-garo	<i>Mastixiodendron pachyclados</i>
garuga	<i>Garuga floribunda</i>
giam	<i>Hopea iriana</i>
gripe	<i>Nothofagus perryi</i> (Nos. 1495, 1491)
gum, lemon-scented	<i>Eucalyptus citriodora</i>
gwaragwaro	<i>Calophyllum vitiense</i>
gwatasaliu	<i>Alstonia spectabilis</i>
hardwood, yellow	<i>Neonauclea papuana</i>
heritiera, NG	<i>Heritiera</i> sp.
hopea	<i>Hopea iriana</i>
hui	<i>Elmerrillia papuana</i>

TABLE 8 (Continued)

Common Name	Botanical Name
ilimo	<i>Octomeles sumatrana</i>
ironbark, scrub	<i>Bridelia minutiflora</i>
kako	<i>Terminalia calamansanai</i>
kamarere	<i>Eucalyptus deglupta</i> (Nos. 1320, 1560)
kandis	<i>Garcinia myrtifolia</i>
karamati	<i>Campnosperma brevipetiolata</i>
karamut	<i>Campnosperma brevipetiolata</i>
kauceuti	<i>Kermadecia vitiensis</i>
kaudamu	<i>Myristica</i> spp.
kaunicina-kaunigai	<i>Canarium</i> spp. (No. 1407/1425)
kaunigai	<i>Canarium</i> spp. (No. 1407/1425)
kauri, East Indian	<i>Agathis dammara</i>
kauri, Fijian	<i>Agathis vitiensis</i>
kauvula	<i>Endospermum macrophyllum</i>
kete	<i>Planchonella thyrsoidea</i>
ketekete	<i>Campnosperma brevipetiolata</i>
kiso	<i>Chisocheton schumannii</i> , <i>Chisocheton</i> sp.
koka	<i>Bischofia javanica</i>
kona	<i>Burckella obovata</i>
kuasi	<i>Podocarpus neriifolius</i>
kwako	<i>Terminalia calamansanai</i>
kwila	<i>Intsia bijuga</i> (Nos. 1300, 1421)
labula	<i>Anthocephalus chinensis</i>
lacewood	<i>Sterculia shillinglawii</i> , <i>Sterculia vitiensis</i>
lacewood, yellow	<i>Polyalthia oblongifolia</i>
laelae	<i>Celtis philippinensis</i>
lalato	<i>Xylocarpus granatum</i>
lamilami	<i>Archidendron oblongum</i>
laran	<i>Anthocephalus chinensis</i>
laubu	<i>Garcinia myrtifolia</i>
la'usi	<i>Celtis latifolia</i>
mahogany, American	<i>Swietenia macrophylla</i>
mahogany, NG	<i>Dysoxylum</i> sp.
mako	<i>Trichospermum richii</i>
malamalarufa	<i>Eugenia tierneyana</i>
malangali	<i>Canarium</i> spp. (No. 1628)
malaone	<i>Parinari salomonensis</i>
malas	<i>Homalium foetidum</i>
maliolo	<i>Palaquium</i> spp., <i>Planchonella firma</i>
mamafai	<i>Albizia</i> spp.
mango	<i>Mangifera minor</i>
mangosteen	<i>Garcinia myrtifolia</i>
mangrove, cedar	<i>Xylocarpus granatum</i>
manilkara	<i>Manilkara kanosiensis</i>
maniltoa	<i>Maniltoa psilogyne</i> , <i>Maniltoa</i> spp.
maple, Fijian	<i>Palaquium fidiense</i>
maple, NG	<i>Flindersia amboinensis</i>
maple, NG	<i>Flindersia heterophylla</i> , <i>F. pimenteliana</i>

TABLE 8 (Continued)

Common Name	Botanical Name
maple, scented	<i>Flindersia heterophylla</i>
maple, silkwood	<i>Flindersia pimenteliana</i>
masiratu	<i>Degeneria vitiensis</i>
mavota	<i>Gonystylus punctatus</i>
milo	<i>Elaeocarpus sphaericus</i> (No. 1608)
milkwood	<i>Alstonia scholaris</i>
mocomoco	<i>Samanea saman</i>
moivi	<i>Maniltoa</i> spp.
mole	<i>Xanthophyllum papuanum</i>
moustiquaire	<i>Cryptocarya</i> spp.
mudi	<i>Dillenia salomonensis</i>
neubergia	<i>Neubergia corynocarpa</i>
nunura	<i>Gonystylus macrophyllus</i>
nutmeg	<i>Horsfieldia irya</i> , <i>Myristica buchneriana</i> , <i>Myristica</i> spp.
oak, NG	<i>Castanopsis acuminatissima</i>
oak, tulip, white	<i>Pterygota horsfieldii</i>
obah	<i>Eugenia onesima</i> , <i>E. tierneyana</i> , <i>Eugenia</i> sp.
one one	<i>Parinari salomonensis</i>
oora	<i>Planchonella firma</i>
ororo	<i>Planchonella firma</i>
pai	<i>Araucaria hunsteinii</i>
palaquium, BSIP	<i>Palaquium</i> spp.
palaquium, Fijian	<i>Palaquium hornei</i>
parinari, BSIP	<i>Parinari salomonensis</i>
parinari, Fijian	<i>Parinari insularum</i>
pimeleodendron	<i>Pimeleodendron amboinicum</i>
pine, black	<i>Podocarpus amarus</i>
pine, Bulolo	<i>Araucaria hunsteinii</i>
pine, kauri	<i>Agathis dammara</i>
pine, klinki	<i>Araucaria hunsteinii</i>
pine, milky	<i>Alstonia scholaris</i>
planchonella, BSIP	<i>Planchonella firma</i> , <i>P. thyrsoides</i>
planchonella, Fijian	<i>Planchonella vitiensis</i>
planchonella, NG	<i>Planchonella kaernbachiana</i> , <i>P. torricellensis</i>
planchonia	<i>Planchonia papuana</i>
pleiogynium	<i>Pleiogynium timoriense</i>
podocarp	<i>Podocarpus amarus</i>
podocarp, Fijian	<i>Podocarpus neriifolius</i>
podocarp, red	<i>Dacrycarpus imbricatus</i> , <i>Decussocarpus vitiensis</i>
quandong, BSIP and NG	<i>Elaeocarpus sphaericus</i> (Nos. 1608, 1337)
qumu	<i>Acacia richii</i>
raintree	<i>Samanea saman</i>
ramin, BSIP	<i>Gonystylus macrophyllus</i>
ramin, Fijian	<i>Gonystylus punctatus</i>
rassu	<i>Araucaria hunsteinii</i>
rosarosa	<i>Heritiera ornithocephala</i>

TABLE 8 (Continued)

Common Name	Botanical Name
rosewood, NG	<i>Pterocarpus indicus</i>
rufa	<i>Eugenia tierneyana</i>
sa	<i>Parinari insularum</i>
sacau	<i>Palaquium hornei</i>
sarosaro	<i>Planchonella vitiensis</i>
sasauira	<i>Dysoxylum</i> spp. (Nos. 1552, 1631)
satinash, NG	<i>Eugenia</i> sp.
satinash, NG	<i>Syzygium buettnerianum</i>
satinwood, pink	<i>Buchanania macrocarpa</i>
schizomeria	<i>Schizomeria serrata</i> (Nos. 1383, 1613)
she-oak, beach, Fijian	<i>Casuarina nodiflora</i>
siliu'u	<i>Alstonia spectabilis</i>
silkwood, red	<i>Palaquium hornei</i> , <i>Planchonella kaernbachiana</i> , <i>P. torricellensis</i>
silkwood, white, Fijian	<i>Endospermum macrophyllum</i>
siris, white	<i>Ailanthus peekelii</i>
sloanea	<i>Sloanea forbesii</i> , <i>Sloanea</i> sp.
spondias	<i>Spondias dulcis</i>
sterculia, Fijian	<i>Sterculia vitiensis</i>
sterculia, NG	<i>Sterculia shillinglawii</i>
suala	<i>Alstonia scholaris</i>
sualisualo	<i>Terminalia calamansanai</i>
taba'a	<i>Alstonia scholaris</i>
taun	<i>Pometia pinnata</i> , <i>P. tomentosa</i>
terminalia	<i>Terminalia</i> spp. (Nos. 1392, 1496)
terminalia, brown	<i>Terminalia brassii</i> (Nos. 1400, 1603), <i>T. kaernbachii</i>
terminalia, yellow	<i>Terminalia calamansanai</i> , <i>T. complanata</i>
tetrameles	<i>Tetrameles nudiflora</i>
tivi	<i>Terminalia pterocarpa</i>
tristiropsis	<i>Tristiropsis acutangula</i> , <i>T. canarioides</i>
tumi	<i>Diospyros</i> sp.
vaivai-ni-vaivalagi	<i>Samanea saman</i>
vaivai-ni-veikau	<i>Serianthes myriadenia</i>
velau	<i>Casuarina nodiflora</i>
vesi	<i>Intsia bijuga</i>
vitex, NG	<i>Vitex cofassus</i>
vuga	<i>Metrosideros collina</i>
vutu	<i>Barringtonia edulis</i>
waci-waci	<i>Sterculia vitiensis</i>
walnut, NG	<i>Dracontomelum mangiferum</i>
walnut, Pacific	<i>Dracontomelum mangiferum</i>
watergum	<i>Eugenia</i> sp.
watergum, NG	<i>Syzygium buettnerianum</i>
yaka	<i>Dacrydium</i> spp.
yasi-yasi I and II	<i>Syzygium</i> spp.

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